In the CLAIMS Section

Please amend the claims as follows:

1. (currently amended) A<u>n ultrasound clutter filter</u> system<u>,</u> comprising<u>:</u>

a processor ~~that is~~ configured to iteratively select an optimal <u>high pass</u> filter for <u>progressive, ordered</u> filtering [[out]] <u>of</u> clutter from ultrasound color flow imaging data wherein a determination of whether a <u>high pass</u> filter is optimal is made by comparing an index to a threshold for that index, the index being computed using a mathematical formula including a mean frequency and a magnitude of a filtered signal<u>, wherein a high pass filter input for each iterative selection is the original ultrasound color flow imaging data</u>.

2. (previously presented) The system of claim 1 wherein the filtering is performed over each packet of flow data that corresponds to an acoustic point in a color flow region of interest.

3. (currently amended) The system of claim 1 wherein a criterion for selecting the optimal <u>high pass</u> filter is if [[a]] <u>the</u> filtered signal is less than a threshold.

4. (currently amended) The system of claim 1 wherein a criterion for selecting the optimal <u>high pass</u> filter is if a magnitude of a portion of [[a]] <u>the</u> filtered signal that is within a predetermined frequency range is less than a threshold.

5. (currently amended) The system of claim 1 wherein a criterion for selecting the optimal <u>high pass</u> filter is if a total energy of the filtered signal is less than an energy threshold.

6. (previously presented) The system of claim 1 wherein the filtering is performed in real time while imaging.

7. (currently amended) The system of claim 1 further comprising a finite number of high pass filters from which the optimal high pass filter is selected.

8. (currently amended) The system of claim 7 in which the finite number of high pass filters is two.

9. (currently amended) An ultrasound clutter filter system~~,~~ comprising:

a processor ~~that is~~ configured to iteratively select an optimal high pass filter for progressive, ordered filtering [[out]] of clutter from ultrasound color flow imaging data wherein a criterion for selecting the optimal high pass filter is if a mean frequency of [[a]] filtered signal data is less than a clutter frequency threshold wherein if the mean frequency is less than the clutter frequency threshold is determined by whether an absolute value of an imaginary part of a first order autocorrelation of ~~a color flow~~ the filtered signal data is less than a constant times a real part of the autocorrelation, where the constant is determined by the clutter frequency threshold, wherein a high pass filter input for each iterative selection is the original ultrasound color flow imaging data.

10. (currently amended) The system of claim 9 wherein a criterion for selecting the optimal high pass filter further comprises if [[a]] the filtered signal data is less than a threshold.

11. (currently amended) The system of claim 9 wherein a criterion for selecting the optimal high pass filter further comprises if a magnitude of a portion of [[a]] the filtered signal that is within a predetermined frequency range is less than a threshold.

12. (currently amended) The system of claim 9 wherein a criterion for selecting the optimal high pass filter further comprises if a total energy of the filtered signal is less than an energy threshold.

13. (previously presented) The system of claim 9 wherein the filtering is performed over each packet of flow data that corresponds to an acoustic point in a color flow region of interest.

14. (previously presented) The system of claim 9 wherein the filtering is performed in real time while imaging.

15. (currently amended) The system of claim 9 further comprising a finite number of high pass filters from which the optimal high pass filter is selected.

16. (currently amended) The system of claim 15 in which the finite number of high pass filters is two.

17. (currently amended) An ultrasound clutter filtering method, comprising:

iteratively selecting an optimal high pass filter for progressive, ordered filtering wherein the iteratively selecting comprises computing an index using a mathematical formula including a mean frequency and a magnitude of a filtered signal and determining whether a filter is optimal by comparing the index to a threshold, wherein a high pass filter input for each iterative selection is original ultrasound color flow data; and

filtering [[out]] clutter from the ultrasound color flow data until the clutter is substantially removed.

18. (previously presented) The method of claim 17 wherein the filtering comprises filtering an individual packet of the ultrasound color flow data that corresponds to an acoustic point in a region of interest.

19. (previously presented) The method of claim 17 wherein the filtering is performed in real time while collecting the ultrasound color flow data.

20. (currently amended) The method of claim 17 wherein the iteratively selecting further comprises determining if [[a]] the filtered signal is less than a threshold.

21. (currently amended) The method of claim 17 wherein the iteratively selecting further comprises determining if a magnitude of [[a]] the filtered signal is less than a than a frequency threshold.

22. (currently amended) The method of claim 17 wherein the iteratively selecting further comprises selecting a high pass filter from a finite number of high pass filters.

23. (currently amended) The method of claim 17 wherein the iteratively selecting further comprises selecting one of two high pass filters.

24. (previously presented) The method of claim 17 wherein the iteratively selecting further comprises determining if a magnitude of a color flow signal in a preselected frequency range is less than a color flow signal threshold wherein a phase shift is less than a phase shift threshold.

25. (currently amended) An ultrasound clutter filtering method, comprising:

iteratively selecting an optimal high pass filter for progressive, ordered filtering of ultrasound color flow data wherein the iteratively selecting comprises determining if a magnitude of a color flow signal in a preselected frequency range is less than a color

flow signal threshold, wherein the determining includes determining whether an absolute value of an imaginary part of a first order autocorrelation of the color flow [[signal]] data is less than a constant times a real part of the autocorrelation, where the constant is determined by a frequency threshold, wherein a high pass filter input for each iterative selection is the original ultrasound color flow data, and;

filtering [[out]] clutter from the ultrasound color flow data until the clutter is substantially removed.

26. (previously presented) The method of claim 25 wherein the filtering comprises filtering an individual packet of the ultrasound color flow data that corresponds to an acoustic point in a region of interest.

27. (previously presented) The method of claim 25 wherein the filtering is performed in real time while collecting the ultrasound color flow data.

28. (currently amended) The method of claim 25 wherein the iteratively selecting further comprises determining if [[a]] the filtered signal is less than a threshold.

29. (currently amended) The method of claim 25 wherein the iteratively selecting further comprises determining if a magnitude of frequency of [[a]] the filtered signal is less than a frequency threshold.

30. (previously presented) The method of claim 25 wherein determining further comprises determining whether a phase shift is less than a phase shift threshold.

31. (currently amended) The method of claim 25 wherein the iteratively selecting further comprises selecting a high pass filter from a finite number of high pass filters.

32. (currently amended) The method of claim 25 wherein the iteratively selecting further comprises selecting one of two high pass filters.

33. (new) The system of claim 7, wherein the infinite number of high pass filters comprises a finite impulse response filter.

34. (new) The system of claim 7, wherein the infinite number of high pass filters comprises an infinite impulse response filter.

35. (new) The method of claim 23, wherein one of the two high pass filters comprises a finite impulse response filter.

36. (new) The method of claim 23, wherein one of the two high pass filters comprises an infinite impulse response filter.